

Recombinant Human Midkine

#R00172

Size: 5 µg/100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Midkine, also named MK, MK1, NEGF 2, is belonging to the neurotrophic and developmentally-regulated heparin-binding molecules family. It is encoded by the MDK gene. The Midkine protein includes five intrachain disulfide bonds which hold two domains and there are three antiparallel beta-sheets in each domain. A chondroitin sulfate proteoglycan, protein-tyrosine phosphatase zeta (PTPzeta), is a receptor for MK. MK promotes the growth, survival, and migration of various cells, and plays roles in neurogenesis and epithelial mesenchymal interactions during organogenesis. The predicted molecular weight is approximately 13.3 kDa, based on a mature peptide length of 118 amino acid residues in the mouse and 121 amino acid residues in the human. Across species, MK shows 87 % identity between the human and murine proteins.

AA Sequence

VAKKKDKVKKGGPGSECAEWAWGPCTPSSKDCGV
GFREGTCGAQTQRIRCRVPCNWKKEFGADCKYKFE
NWXGACDGGTGTKVRQGTLKKARYNAQCQETIRVTK
PCTPKTKAKAKAKKGKGD

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Synonyms	ARAP, Midgestation and Kidney Protein, Neurite Outgrowth-promoting Factor 2, Neurite Outgrowth-promoting Protein
Accession	P21741
GeneID	4192
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 13.4 kDa, a single non-glycosylated polypeptide chain containing 123 amino acids.
Purity	> 97 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The biological activity determined by

a chemotaxis bioassay using human neutrophils is in a concentration range of 0.1-10 ng/ml.

Physical	Sterile Filtered White lyophilized
Appearance	(freeze-dried) powder.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH7.4.
Endotoxin	Less than 1 EU/µg of rHuMidkine as determined by LAL method.
